

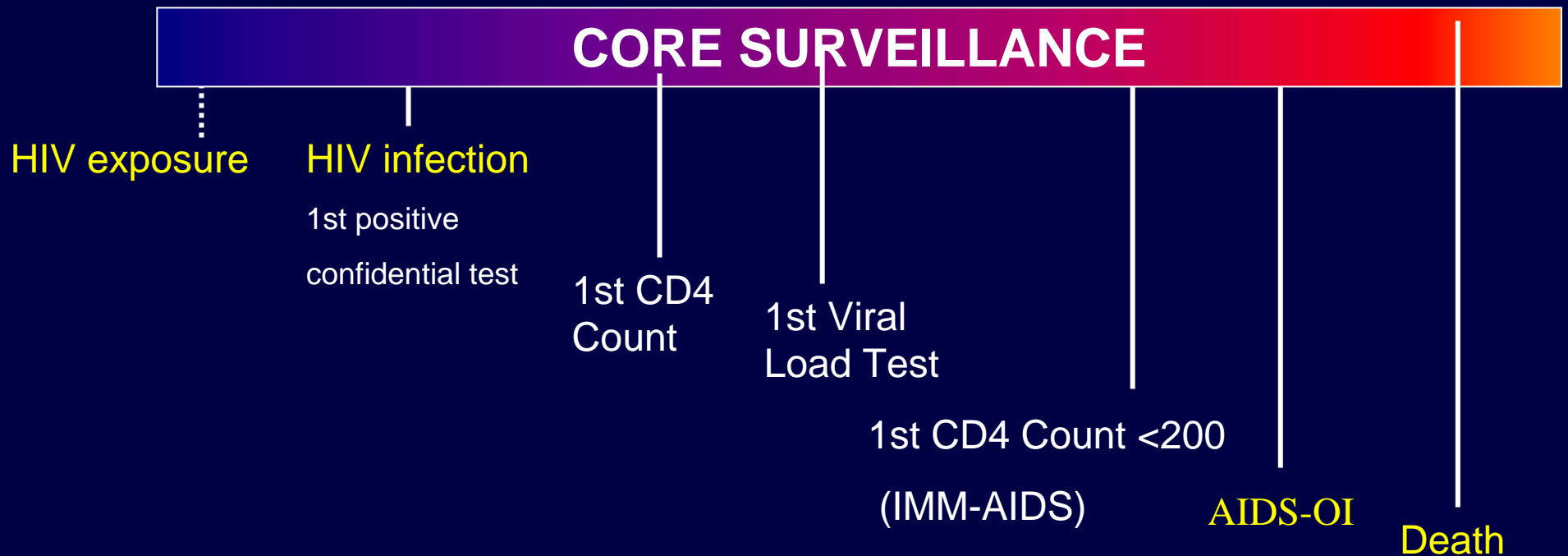
Trends in the Perinatal HIV Epidemic in the U.S. - Updates from Routine and Enhanced Surveillance

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Reporting the Spectrum of HIV/AIDS Morbidity and Mortality



Perinatal Surveillance Objectives

- **Characterize recent trends in perinatal HIV/AIDS**
- **Assess implementation and impact of PHS perinatal prevention guidelines**
- **Assess resource needs for prevention and care**
- **Assess missed opportunities for prevention**
- **Targeting and evaluating prevention efforts**

Reporting of HIV-Exposed Infants

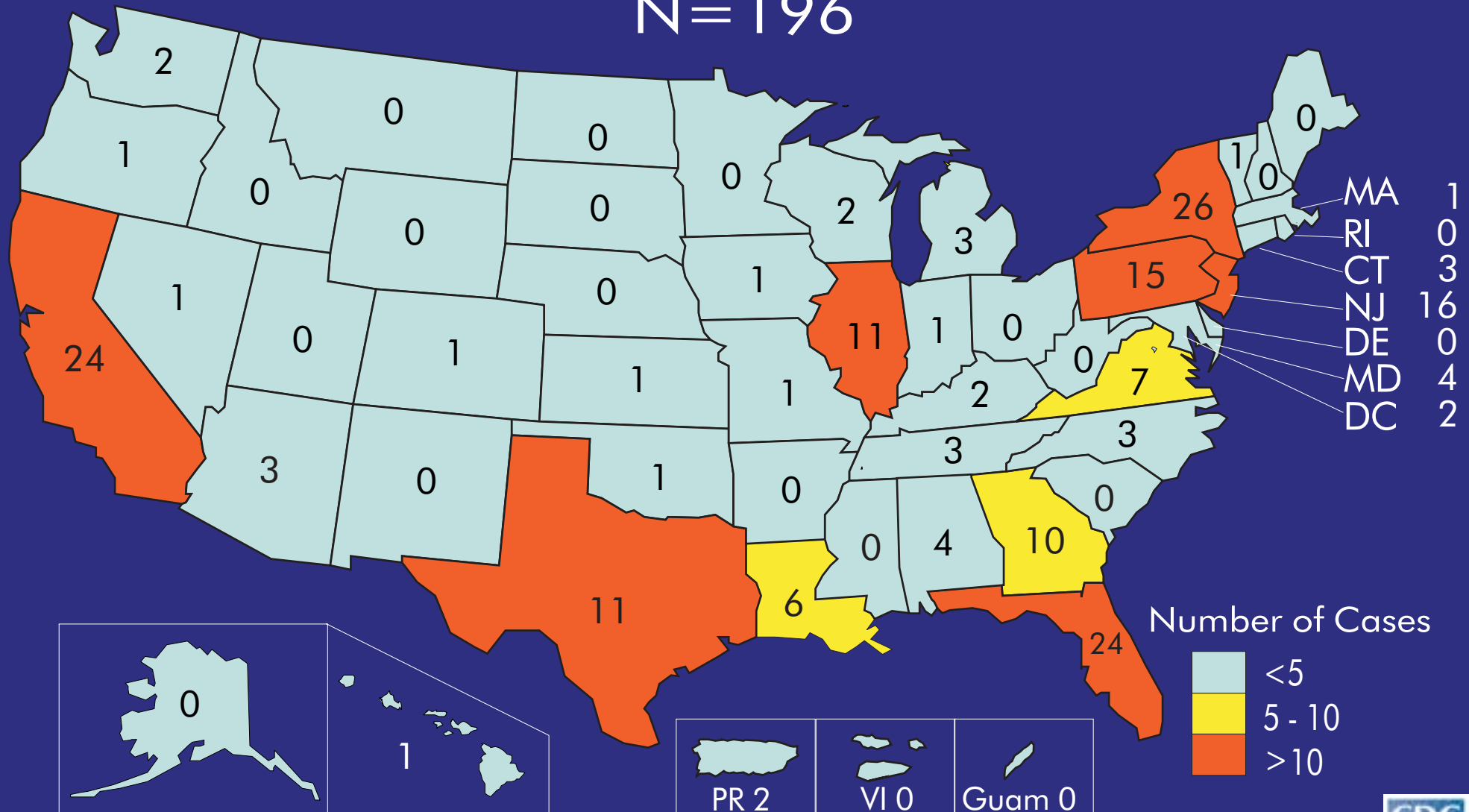
- **CDC Recommendation**
MMWR 1999;48(No. RR-13)
- **CSTE**
- **American Academy of Pediatrics**
Policy Statement in 1998
- **Congress**

Methods: Data Collected Through Routine Perinatal HIV Surveillance

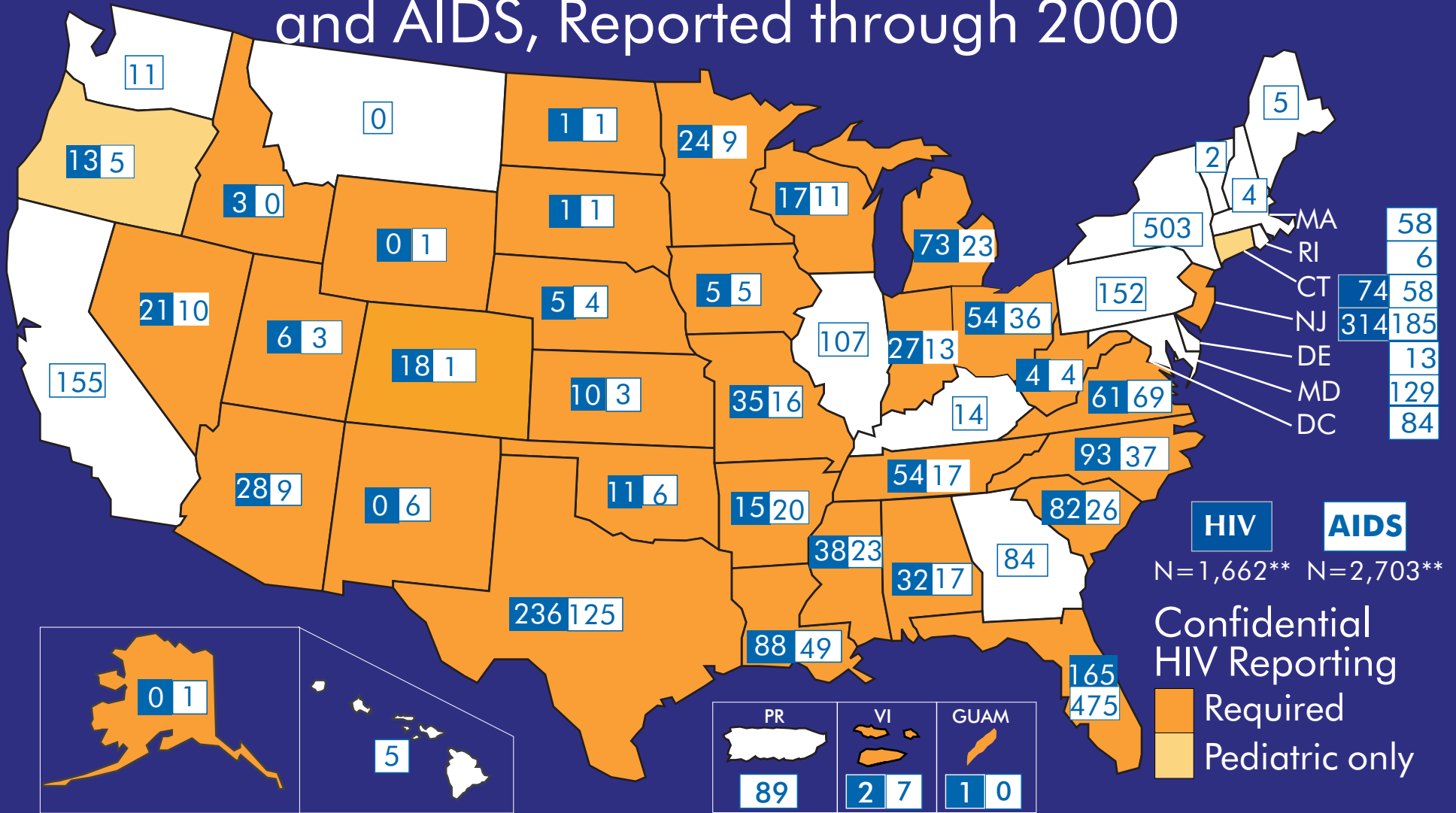
- Maternal HIV status
- Timing and number of PNC visits
- Receipt of antiretroviral therapy
- Type of delivery
- Birth defects in infant

Pediatric AIDS Cases Reported in 2000

N=196



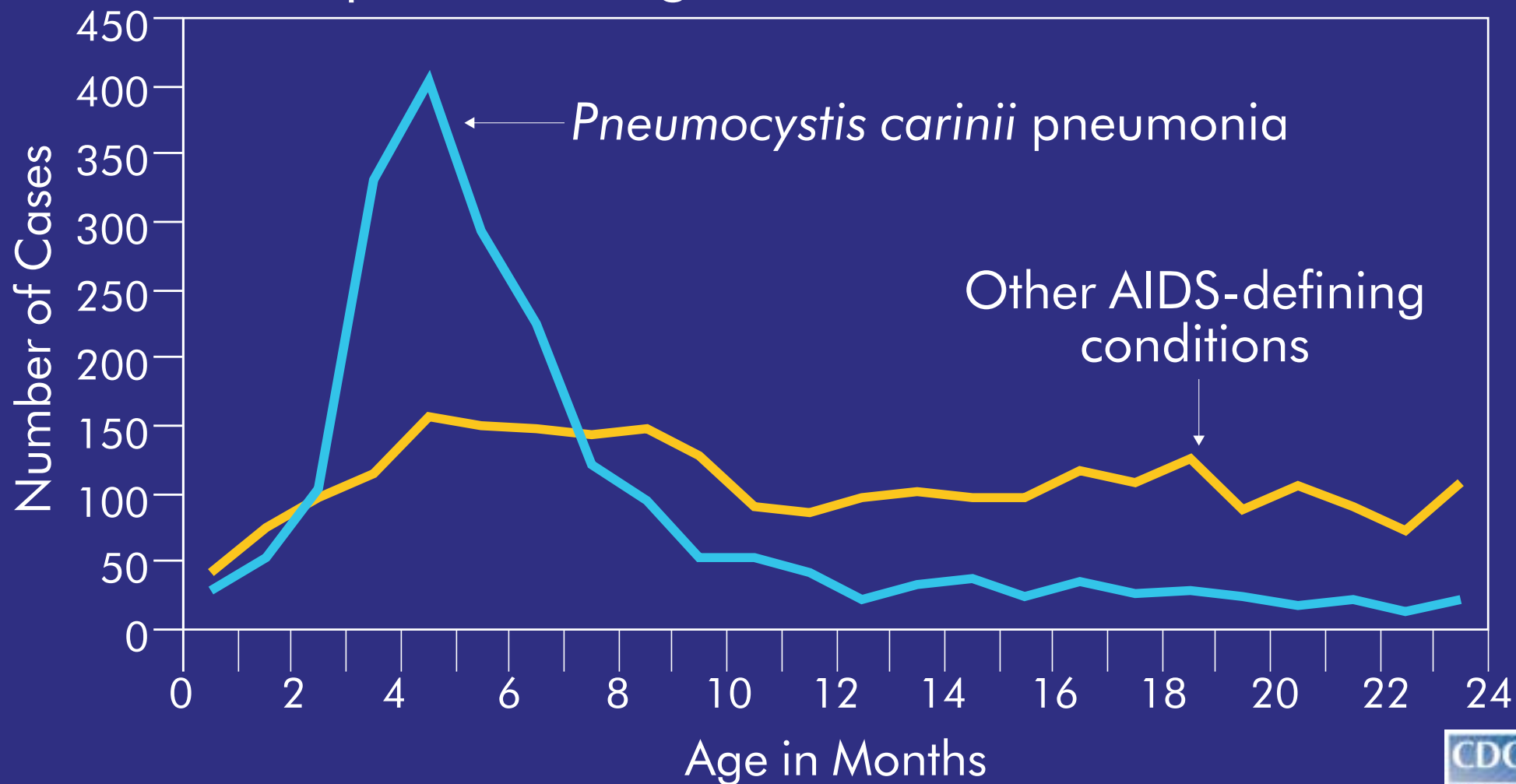
Children <13 Years of Age Living with HIV Infection* and AIDS, Reported through 2000



* For areas with confidential HIV infection surveillance reported by patient name. Age based on current age as of December 2000.

** Total includes cases missing state of residence data.

AIDS-Defining Conditions by Age at Diagnosis for Perinatally-Acquired AIDS Cases Reported through 2000, United States



Time of Maternal HIV Testing among Children Perinatally Exposed or Infected or with AIDS, Reported in 2000, United States

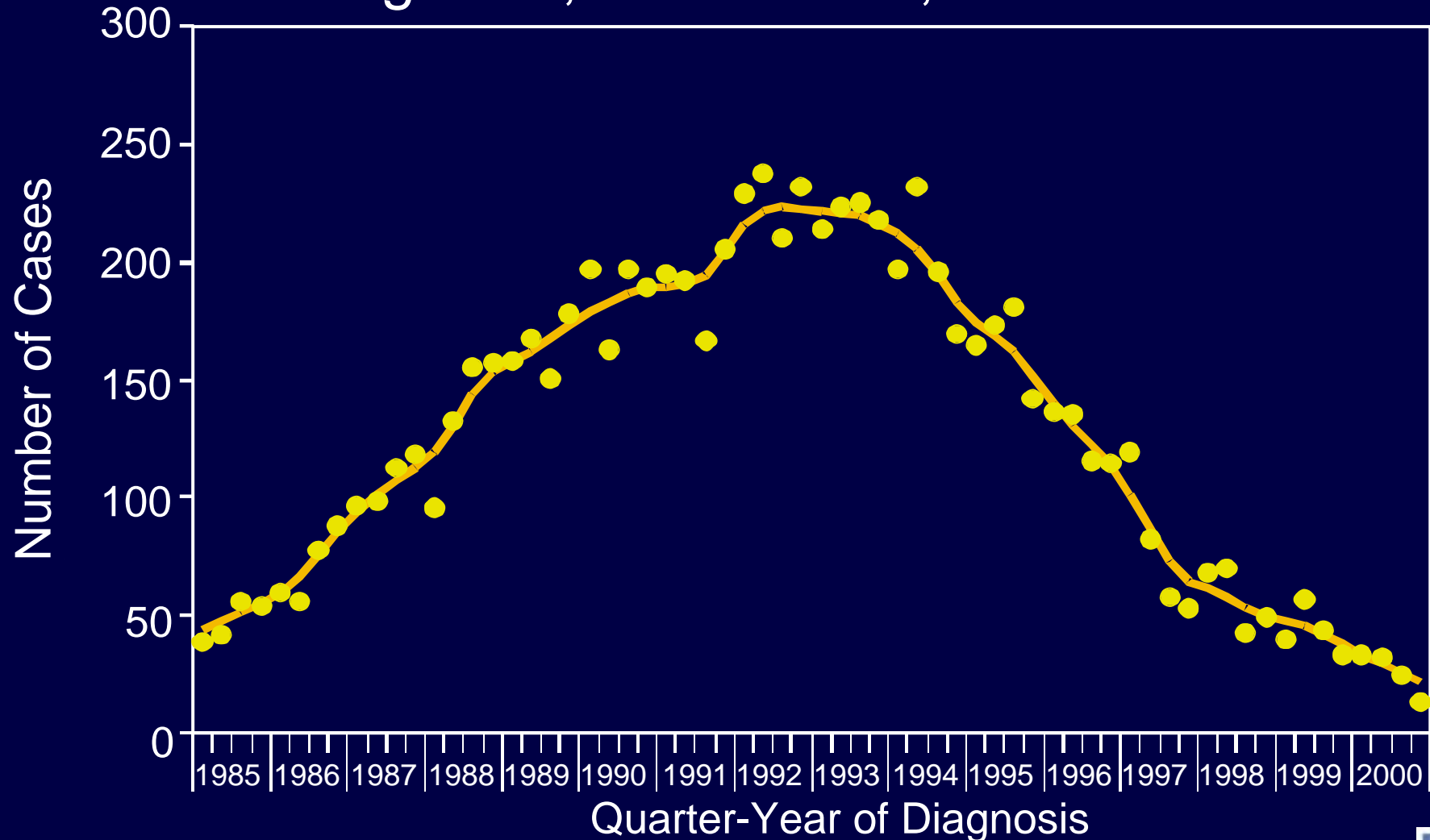
| Time of maternal HIV test | Perinatally Acquired AIDS* N=177 | | HIV Exposed** N=3,325 | | HIV Infected** N=196 | |
|---------------------------|--|----|--------------------------|----|-------------------------|----|
| | No. | % | No. | % | No. | % |
| Before or at birth | 75 | 42 | 3,167 | 95 | 105 | 54 |
| After birth | 60 | 34 | 94 | 3 | 53 | 27 |
| Unknown | 42 | 24 | 64 | 2 | 38 | 19 |

* Excludes 19 children with AIDS reported in 2000 whose HIV exposure category was unknown or other than perinatal

** From 36 areas with confidential pediatric HIV infection surveillance

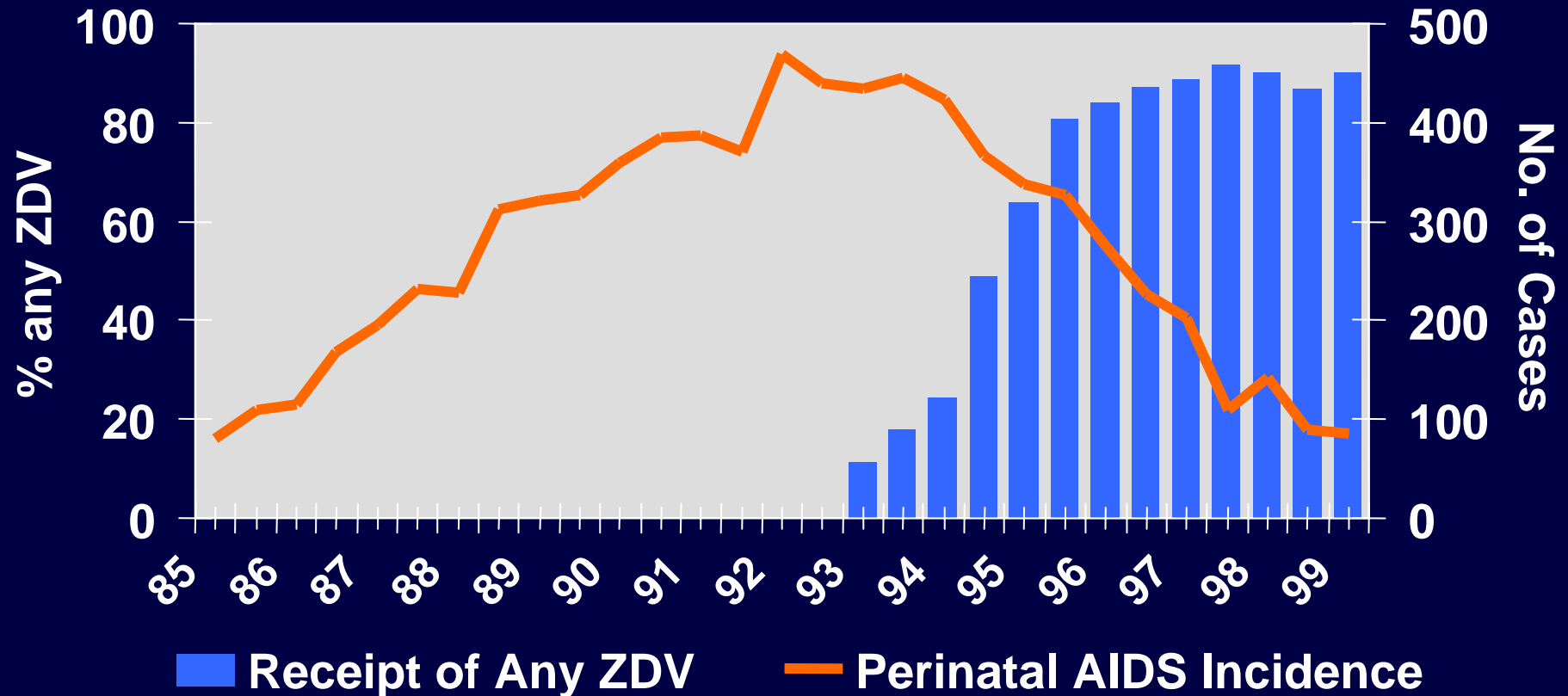


Perinatally Acquired AIDS Cases by Quarter-Year of Diagnosis,* 1985-2000, United States

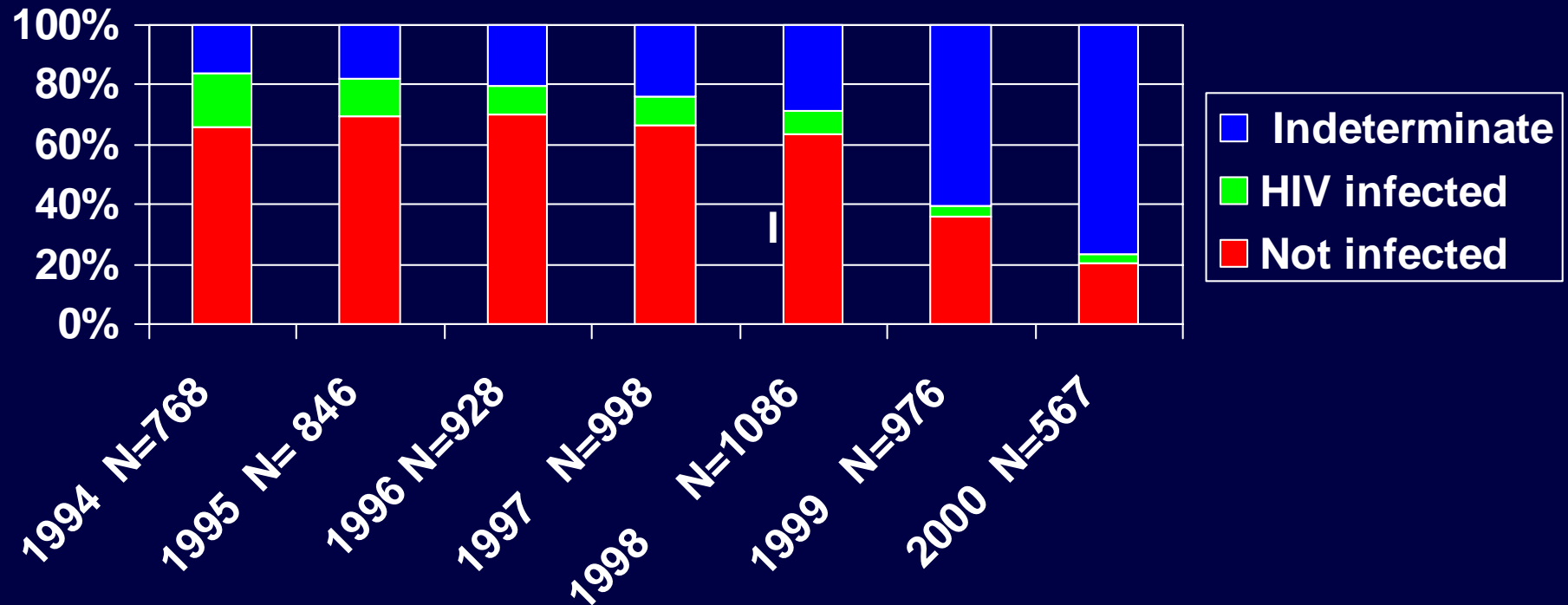


*Adjusted for reporting delays and estimated proportional redistribution of cases initially reported without a risk data reported through December 2001

Perinatally-Acquired AIDS by Half Year of Diagnosis:
U.S. Receipt of Any ZDV (prenatal, intrapartum, neonatal)
among HIV+ Women Tested before/at Birth:
32 HIV reporting states

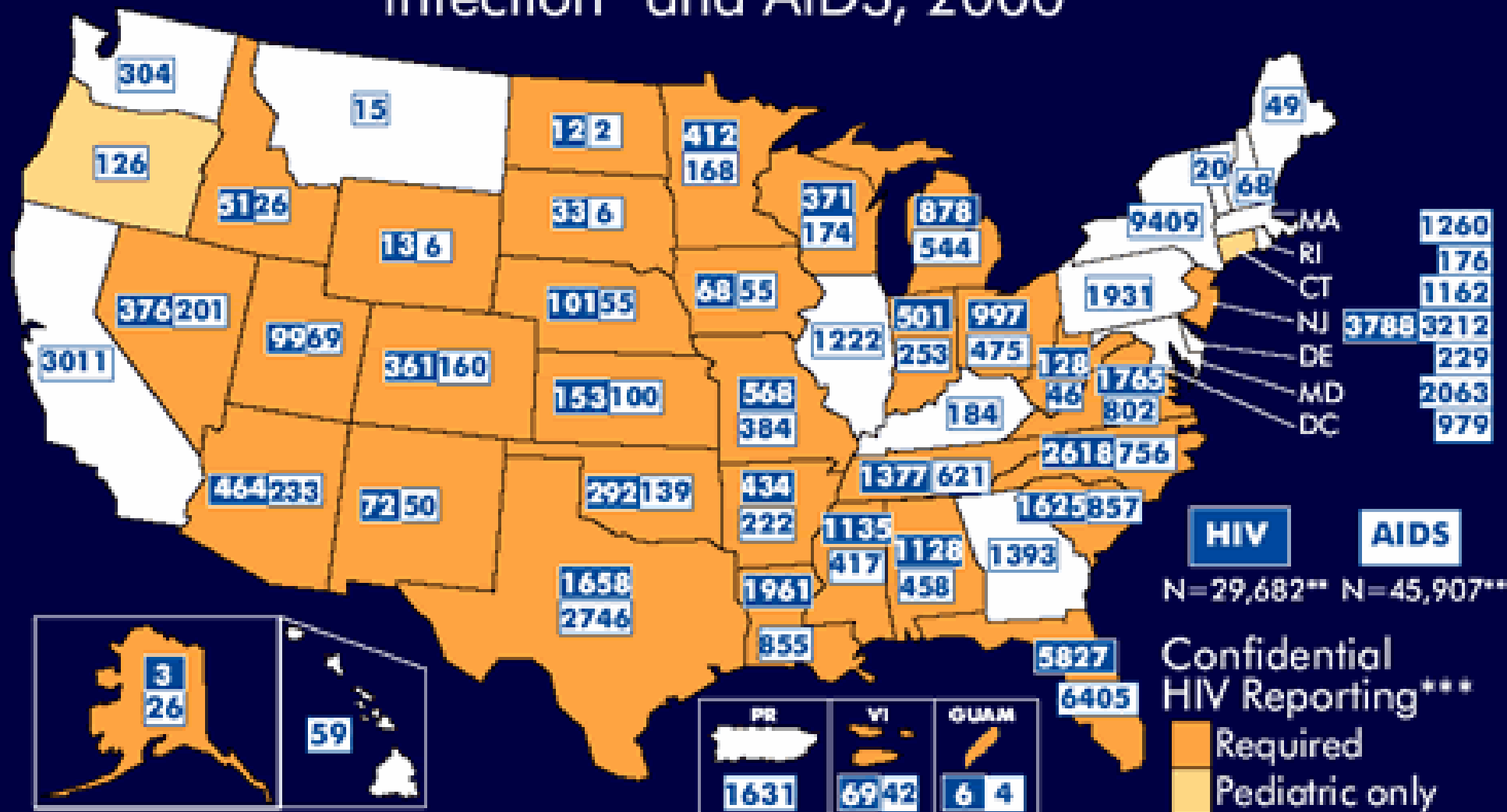


Perinatal HIV infection rates by birth year: infants with 1st HIV evaluation < 2 months*



* States: 32 states with HIV infection reporting

Women 15-44 Years of Age Living with HIV Infection* and AIDS, 2000

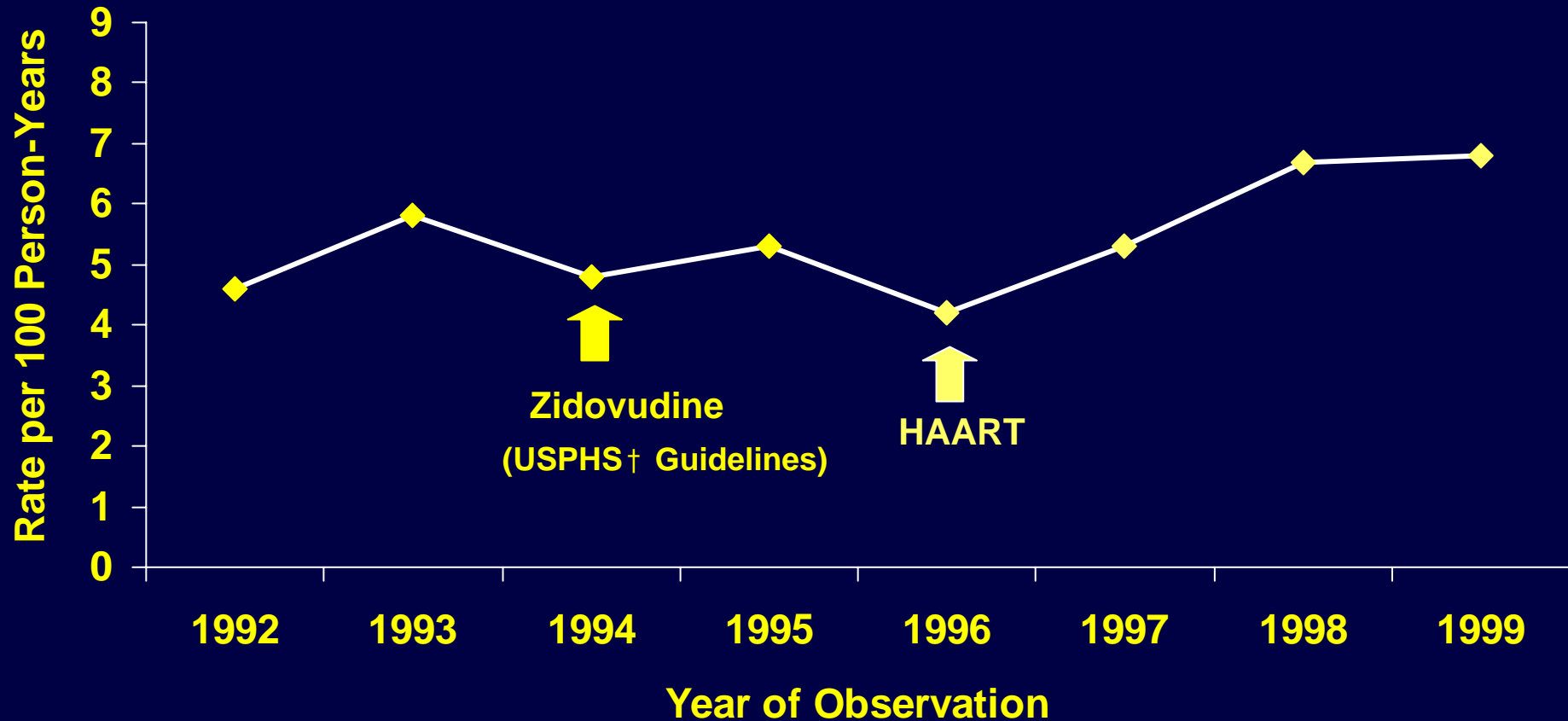


* For areas with confidential HIV infection surveillance. Includes 297 women who were residents of areas without HIV infection surveillance but who were reported by areas with HIV infection surveillance.

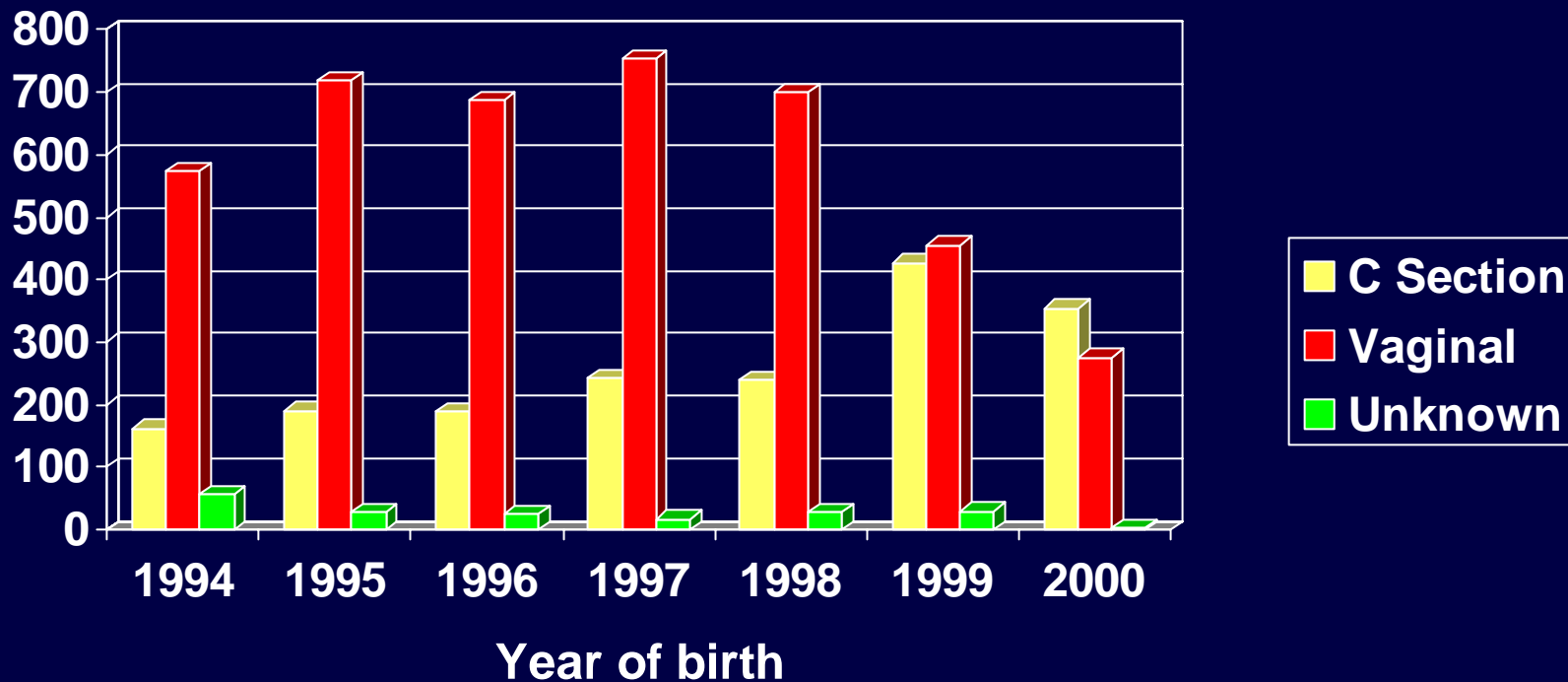
**Totals include cases missing state of residence data.

***HIV cases reported by patient name

Pregnancy Rates* Among HIV-Infected Women in Adult/Adolescent Spectrum of HIV Disease Project, 1992-1999

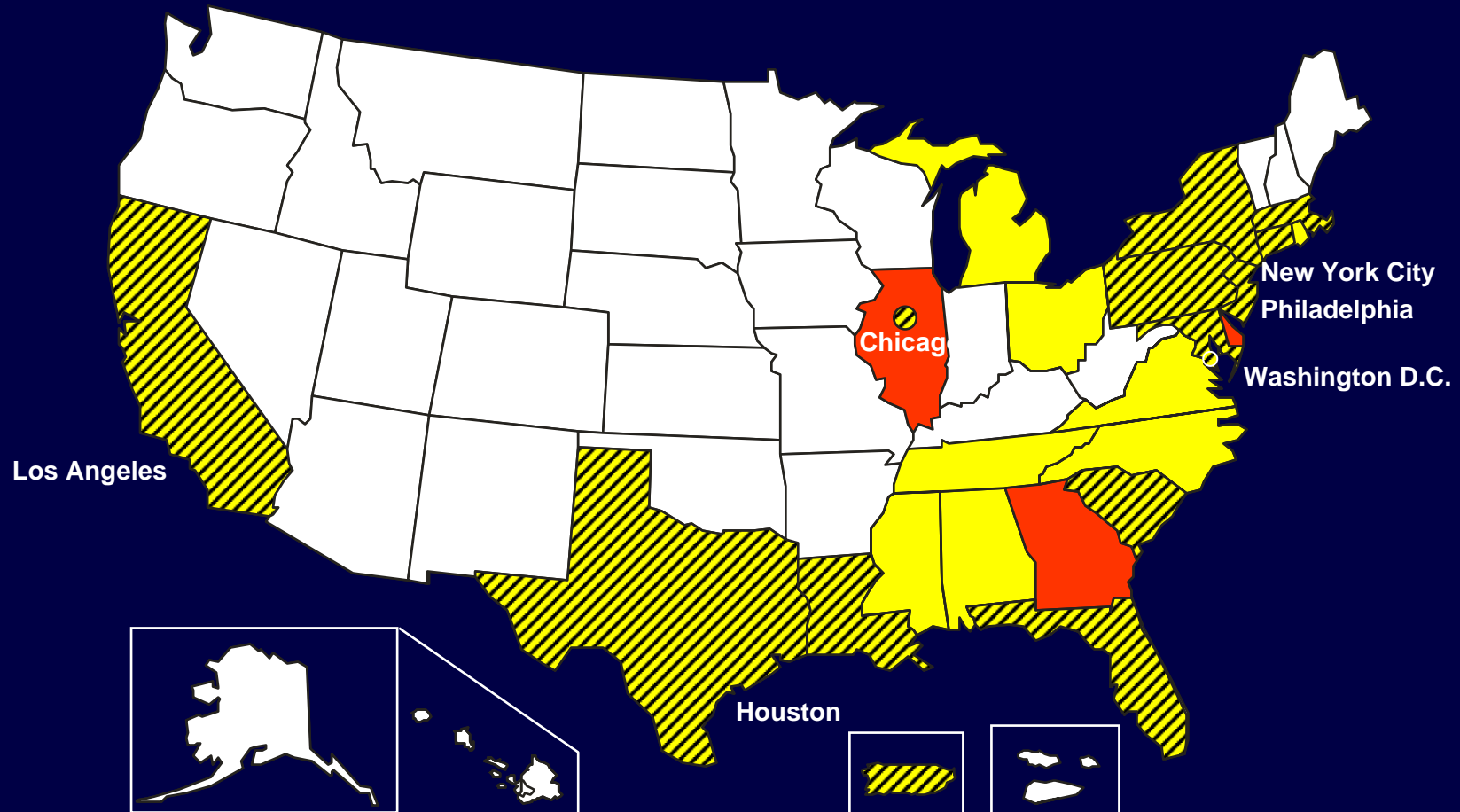


Type of Delivery by Birth Year, 1994–2000, 27 states with Named HIV Reporting Since 1994



Enhanced Perinatal Surveillance – An Update

Project Sites: Enhanced Perinatal HIV Surveillance and Perinatal HIV Prevention



- Enhanced Perinatal Surveillance (EPS) only
- Perinatal Prevention Project (PPP) only
- BOTH EPS and PPP sites

Perinatal HIV Surveillance Methods

- Routine surveillance

- Population-based case reporting
- HIV-exposure, HIV infection, and AIDS

- **Enhanced Surveillance**

- **Active Case Ascertainment**
- **Multiple Sources of Data for Mother and Infant**
- **Birth Cohorts: 1999, 2000, 2001, forward**

Methods for Enhanced Perinatal Surveillance

- In States with Name-Based HIV Reporting
 - Population-based HIV-exposure data
- In States without Name-Based HIV Reporting
 - Facility-based IRB approved protocols
 - Collaboration with PSD, Medicaid, etc

Methods: Data Collected Through Enhanced Perinatal Surveillance (EPS)

- More data on timing and receipt of prenatal care, birth history, and combination ART
- Maternal and infant disease screening
- Maternal reproductive history
- Maternal drug use and STDs during pregnancy
- Rapid testing at delivery
- Antiretroviral resistance testing in infant
- Assessment of maternal and infant care

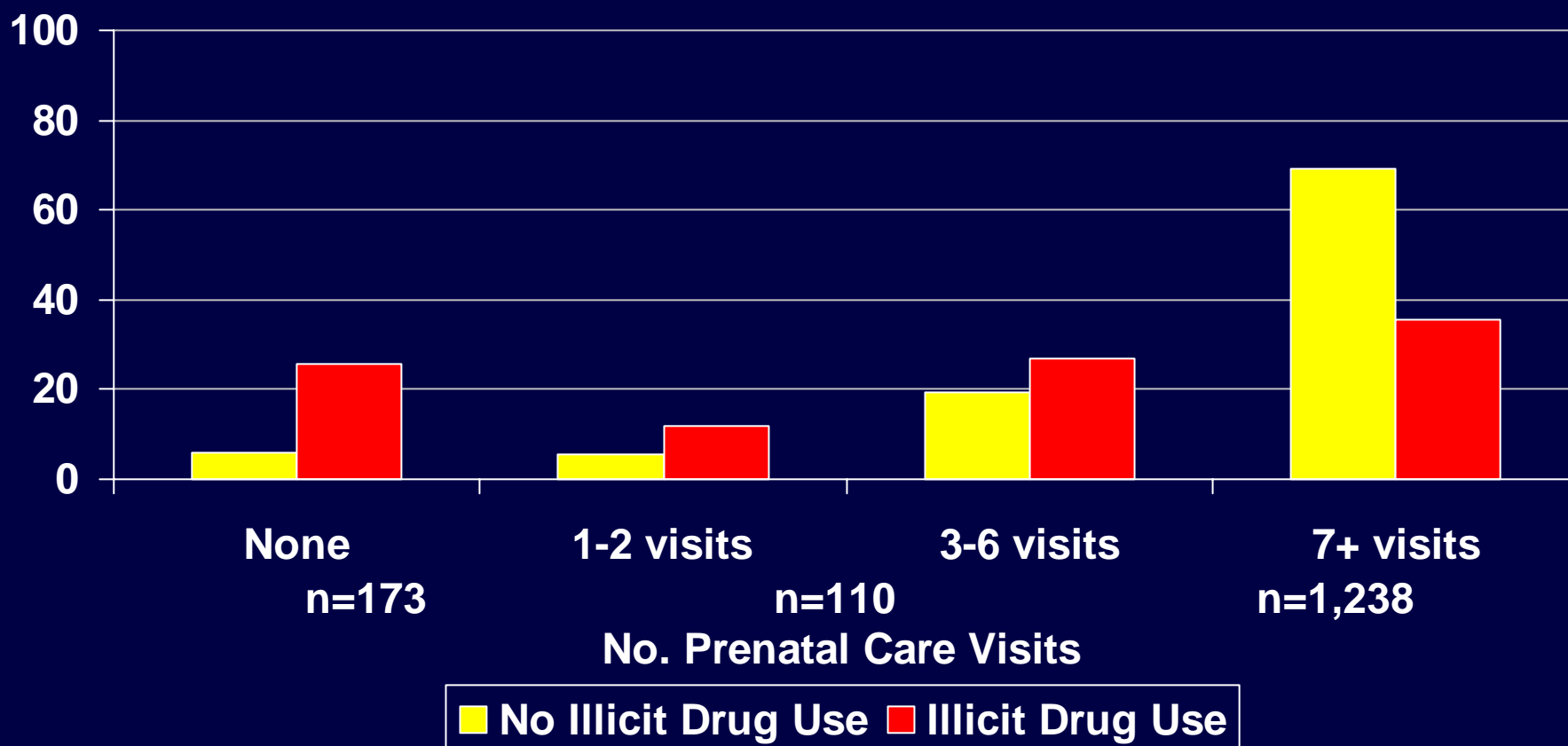
Status of EPS Data Collection as of February 6, 2002

- EPS data abstraction completed on 1,879 HIV-exposed infants in 17 project areas; 1999-2001
- EPS data submitted from:
 - 13 of 16 project areas with named HIV reporting
 - 1 of 5 project areas with HIV reporting using a unique code
 - 3 of 4 project areas with no HIV reporting

Prenatal Care Visits By Illicit Drug Use During Pregnancy

Birth Years 1999-2001;

Preliminary Data 16 of 25 EPS Project Areas



* 164 women with unknown number of PNC visits excluded from this table.

Maternal HIV testing by Birth Year

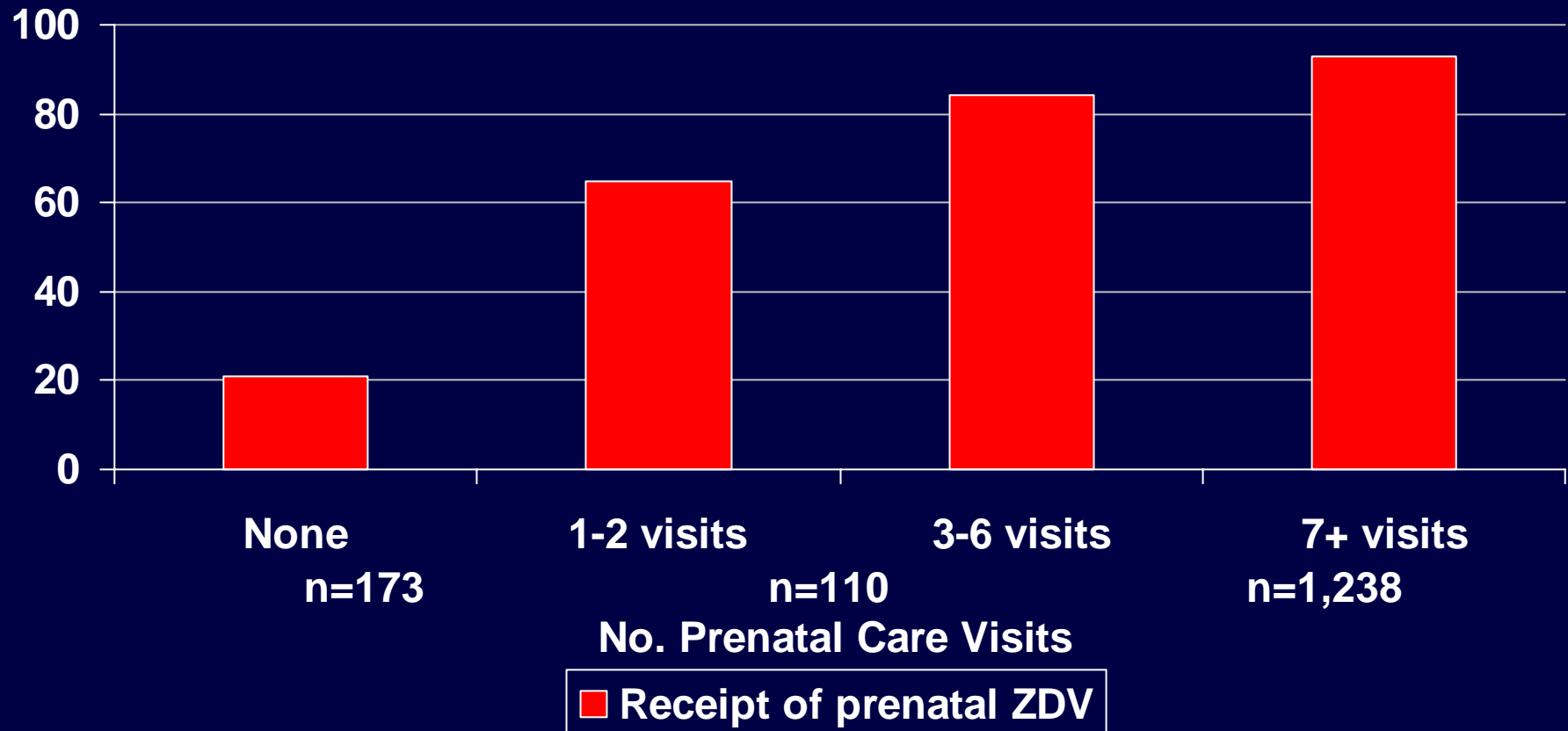
Preliminary Data; 16 of 25 EPS Project Areas

| | <u>Birth Year</u> | | |
|----------------------------|-------------------|-----------------|-----------------|
| | 1999 (N=770) | 2000 (N=524) | 2001 (N=108) |
| <u>Maternal HIV test *</u> | | | |
| Before Birth | 94% | 90% | 94% |
| At Delivery | 2% | 5% | 4% |
| After Birth | 4% | 5% | 3% |
| Time unknown | 1% | 1% | <1% |

* Mothers of 3 infants born in 1999, refused HIV testing



Receipt of Prenatal ZDV By Number of Prenatal Care Visits, Birth Years 1999-2001; Preliminary Data 16 of 25 EPS Project Areas



* 164 women with unknown number of PNC visits excluded from this table.

Receipt of Zidovudine for Prevention of HIV Infection, by Infant Birth Year

Preliminary Data; 16 of 25 EPS Project Areas

| | <u>Birth Year</u> | | |
|------------------------|-------------------|------|------|
| | 1999 | 2000 | 2001 |
| <u>ZDV Component</u> * | | | |
| Prenatal | 84% | 80% | 86% |
| Intrapartum | 79% | 78% | 81% |
| Neonatal | 93% | 93% | 96% |

* 17 mothers refused prenatal ZDV; 7 refused intrapartum ZDV; 2 refused neonatal ZDV

Sexually Transmitted Diseases During Pregnancy

Birth Years 1999-2001;

Preliminary Data from 16 of 25 EPS Project Areas

Overall, 503 (30%) of mothers were diagnosed with at least one STD during pregnancy

- 77% of women had one STD, 18% had two and 6% had three or more STDs
- 42% of women had trichomonas, 41% chlamydia, 17% syphilis, 17% herpes, 13% gonorrhea, and 2% PID

Documentation of Mother's HIV Status Birth Years 1999-2001;

Preliminary Data from 16 of 25 EPS Project Areas

- Of mothers who received prenatal care, HIV status was documented in 90% of the prenatal care records.
- Mother's HIV status was documented in 92% of labor and delivery records.
- Mother's HIV status was documented in 93% of infant birth records.+

An Example for Monitoring Prevention Failures

217 HIV-infected Children Born 1999-2001

Preliminary Data; 16 of 25 EPS Project Areas

- Prenatal Care
 - 22% had none; 27% unknown
 - Of those who received care, 14% had ≤ 2 visits
- Maternal HIV testing
 - 7% tested at delivery
 - 20% tested after delivery
- Antiretroviral therapy
 - Of mothers tested before delivery and who received prenatal care, 30% were not prescribed prenatal ZDV

Enhanced Perinatal Surveillance

Recent Publications

- Progress Towards Elimination of Perinatal HIV Infection – Michigan, 1993-2000
 - <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5105a1.htm>
- Zidovudine and Perinatal HIV-1 Transmission: A Population-Based Approach (Data from SC); Due out April 2002 at www.pediatrics.org
- Successful Implementation of Perinatal HIV Prevention Guidelines: A Multistate Surveillance Evaluation
 - www.cdc.gov/mmwr/preview/mmwrhtml/rr5006a2.htm

Preliminary EPS Data Show:

- Many HIV+ women are still not receiving prenatal care, especially those using drugs
- Over 90% of HIV+ women who receive 7+ visits receive ZDV
- There are high levels of prenatal, intrapartum, and neonatal antiretroviral use for HIV+ women tested before the child's birth

Conclusions

- Many infants still perinatally exposed to HIV
 - women living longer with HIV
 - Evidence of increasing pregnancy rates among HIV+ women
- Surveillance data crucial for prevention planning and targeting of activities.
- Surveillance data contribute to assessing missed prevention opportunities.